



ARC Communications Research Network

# Newsletter June 2008

## Convenors Report

We are now mid-year and most ACoRN partner organisations are travelling well in terms of putting ACoRN funds to good use. The next big activity for ACoRN is our multi-purpose showcase event in Melbourne on July 14-17. The four-day event features two established workshops, an industry day, and an international tutorial. The *Multi-Hop Wireless Networking Workshop* is running for the third time, and has established itself as the main ACoRN event in the wireless multi-hop networking area. A lot of credit is due to Dr. Aruna Jayasuriya (UniSA) and Dr. Lavy Libman (NICTA) for carrying forward this workshop. Focusing on similar topics but from a physical-layer perspective, the *Cooperative Wireless Communications Workshop* is running for the second time, and is therefore also on track to become a regular event. Credit here goes to A/Prof. Jinhong Yuan (UNSW) and Dr. Yonghui Li (Uni Sydney). It is especially exciting to have these two workshop events co-located in time and space, maximising the opportunities for networking across two big disciplinary areas within ACoRN. In connection with the Cooperative workshop, Dr. Mischa Dohler (an internationally acclaimed expert in the area) will present a one-day tutorial entitled *A Crash Course in Cooperative Wireless Networks*. This tutorial provides a great opportunity to get up to speed for both students and seniors in a hot-topic area of wireless communications. Finally, the event features the first joint industry-academia day with a wide range of speakers. The topic areas cover an impressive array of current wire

less technologies, all of which are of particular interest to Australia and current Australian research activities.

Later in the year, we have two school events planned. First up, Dr. Brian Krongold (Uni Melbourne) is organising a 2-day ACoRN School on OFDM systems scheduled for October in Melbourne, featuring several Australian and International experts in the area. This event is a clear must for a majority of ACoRN students. Further towards the end of the year, one of the inventors of network coding, Prof. Raymond Yeung (Chinese University of Hong Kong), will be visiting Australia. In connection with his visit, Dr. Terence Chan (UniSA) will organise a 2-day ACoRN School on Network Coding and Security, which will be presented jointly by Prof. Yeung and Dr. Chan. Keep an eye on the ACoRN website for further details.

As publicised in the previous ACoRN Newsletter, ACoRN and Newcom++ have entered into a new collaborative agreement, further developing the close links between Australia and Europe. Taking advantage of the International Symposium on Information Theory and Applications (ISITA) to be held in New Zealand in December, ACoRN is currently working with Newcom++ to organise a joint workshop event in Australia, in connection with ISITA. A broadcast invitation has been sent to all Newcom++ members, requesting an expression-of-interest by the end of June. We should therefore know shortly if there is sufficient interest for a joint workshop.

Following on from the success of the NEWCOM-ACoRN workshop held in Vienna in 2006, we are currently exploring an active joint role in organising and participating in the general Newcom++ workshop scheduled for April 2009 in Barcelona. There is a lot of interest on both sides for another joint event, so I am quite confident it will go ahead.

Finally, I am happy to announce that four ACoRN members will be nominated for the Tall Poppy Award, administrated through the The Tall Poppy Campaign. The Tall Poppy Campaign is a great initiative from the [Australian Institute of Policy & Science](#) to recognise and celebrate Australian scientific and intellectual excellence and to encourage younger Australians to follow in the footsteps of our outstanding achievers. The award is given in recognition of excellence in research, and is aimed at young researchers within 10 years of Ph.D. graduation. This year, ACoRN is nominating Dr. Mark McDonnell (UniSA) and Dr. David Haley (Cohda Wireless) in South Australia, Dr. Brian Krongold (Uni Melbourne) in Victoria, and Dr. Sarah Johnson (Uni Newcastle) in New South Wales. The winners will be announced in August, September, and October, respectively, in the three respective states. We wish all the nominees good luck.

Lars K. Rasmussen  
ACoRN Network Convenor

## ACoRN Workshops

**Multi-Hop Wireless Networking  
Industry Day  
Co-Operative Communications  
Victoria University**

**14<sup>th</sup>, 15<sup>th</sup> & 16<sup>th</sup> July 2008**

The momentum for these events is building. We have secured a mix of Local and International Speakers to ensure that this event will be informative and beneficial to all attendees.

The inaugural ACoRN Industry Day, "Future Wireless - An Industry Perspective", aims to bring together industry experts and engineers, academic researchers and students to discuss challenges in the development of future wireless technologies, such as 3G Long Term Evolution (LTE), IEEE802.11n and 60GHz wireless networks. There will be speakers from Nokia, Nanoradio, NEC, NICTA, Daintree Networks as well as our own research community

Submission are being received for the Multi-Hop Wireless Networking Workshop, so if you are thinking of submitting an article, don't leave it to the last minute, there are limited spaces.

### 1 Day Tutorial

**A Crash Course on Co-Operative Wireless Networks**

**17th July 2008**

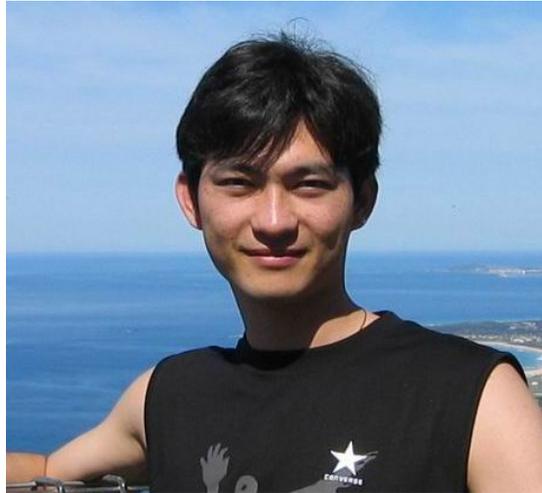
Following the ACoRN 3 day event Dr Mischa Dohler, a senior researcher with Centre Tecnològic de Telecomunicacions de Catalunya (CTTC) in Barcelona, will present a tutorial on the cutting edge challenges related to the analysis, design and development of cooperative wireless communications networks. Mischa has a wealth of experience, prior to joining the CTTC, he was a senior researcher in the R&D division of France Telecom and a lecturer at Kings College London.

Further information can be found at

<http://www.acorn.net.au/event/WorkshopsJuly08/>

## ACoRN Member Profile

### Xiaoyuan Ta's – University of Sydney



Xiaoyuan spent his childhood in Urumchi, Xinjiang Province in China. At the age of 18, he was awarded a third prize in Chinese National Physics Competition and was admitted by Peking University without sitting for entrance examinations. After graduation, he began his career as an assistant engineer in Institute of Electronics, Chinese Academy of Sciences ([IECAS](#)). His major responsibility in IECAS was to perform reliability tests of electronic products on their development stages. He started my Master program in [The University of Sydney](#) in March, 2005. One of the major tasks for my Master degree was to develop a network Quality of Service monitoring system for [Optus Networks Pty Limited](#). He completed his Master degree in March, 2006. His thesis title being " A Quality of Service Monitoring System for Service Level Agreement Verification". He is now a PhD candidate in Electrical and Information Engineering in the University of Sydney and a research assistant in [National ICT Australia Ltd](#). The research topic for his PhD is "The Fundamental Characteristics of Wireless Multi-hop Networks", including Connectivity, Optimal Transmission Range, Phase Transition Width, Largest Connected Component, etc.

His research interests are wireless sensor networks (WSN), wireless ad hoc networks, wireless localization techniques, network quality of service (QoS)



## ACoRN News

### Candidate for IEEE Communications Society – Prof Abbas Jamalipour



As you may already know, elections for 2008 of the IEEE Communications Society is coming up and ballots were sent out starting from 30 May. I am running for the position of Member-at-Large and I am appealing to you for your kind support in this election. If elected, I will make sure to take your voice to the Society and do my best to make the Society as friendly and useful for you as possible. Please kindly ask your friends who are also a member of Communications Society to vote too. The voting must be done by 25 July 2008.

More information available at:  
<http://www.ee.usyd.edu.au/~abbas/biog1.html>

### Changes to Local ACoRN Representatives

**UniSA** - Dr Mark McDonnell has taken over the role of Local ACoRN Representative at UniSA from Ian Holland. Ian has worked on the GLIMMR project at ITR for three years and has taken a position with Dspace in Adelaide.

### University of Adelaide

In April, **Dr Olaf Maennel** left the University of Adelaide and has now taken up a research position with TU-Berlin/T-Labs in Germany.

We wish Dr Maennel all the best!

In May, **Dr Belinda Chiera** was an invited speaker at the Intelligence Center Colloquium, in Chantilly, USA. Dr Chiera discussed the outcomes of her recent research relating to anomaly detection in dynamic structures and the issues of handling missing and ambiguous data. Dr Chiera's talk was very well received by the Intelligence Community and other representatives of the US Government.

### University of South Australia

**Roy Timo** has joined ITR at UNISA from ANU, after submitting his PhD thesis entitled "Information theoretic bounds for overhead in dynamic networks." His PhD was under the supervision of Dr Kim Blackmore and Dr Leif Hanlen. He is working at ITR with Alex Grant and Terrence Chan on the ARC discovery project "Efficient Data Transport using Network Coding."

**Sagar Shenvi** is on a 3 month research internship at ITR, as part of his degree at the Indian Institute of technology, Bombay. He is working with Alex Grant and Terrence Chan on source coding and network information theory.

### Major Changes to the ACoRN website grant applications area.

Over the next few weeks you will notice a change in the forms used to apply for ACoRN grants. ACoRN has always given preference to the approval of attendance grants when accompanied with a research visit. We have streamlined the application forms to make this process easier. We have also incorporated more "compulsory" fields to assist us to correctly evaluate the grant.

Reporting will also be done via the ACoRN website. When you have completed your travel an email will be sent reminding you to submit a travel report. You will be able to view a copy of your application so that you can report against your stated goals and objectives.

We are also working on changes for the Local ACoRN Representatives to make their job a little easier.

If you have any suggestions on how you think the ACoRN web site can be more user friendly please let us know.

## OPPORTUNITIES

**The Institute of Communications and Navigation of the German Aerospace Center (DLR) near Munich are looking for possible cooperation between ACoRN or interested Australian research institutes.**

Their research group 'Mobile Radio Transmission Group' is focused on the PHY Layer of multi-carrier transmission systems and also on the combination of positioning information/estimation with communications. Recently, we are leading the new EU Project WHERE ([www.ict-where.eu](http://www.ict-where.eu)). The WHERE project goals are: Integration of Communication and Navigation; Positioning with mobile radio communications and short range communications systems; Improvement of radio communications systems by using position information; Demonstration/Trials.

Since the WHERE project does not cover all topics and the project is result driven, DLR wants to initiate a new COST Action with the broadened scope of the symbiosis of wireless communications and navigation with the title: SYCONA - symbiosis of wireless communications and navigation. COST Actions (<http://www.cost.esf.org/>) are instruments of the European Science Foundation (<http://www.esf.org/>) to support networking and exchange within a specific research field with duration of 4 years. The funding of a COST Action is based on the reimbursement of travel costs to meetings not for research. Recently there is a new collaboration with the Australian Academy of Science which opens the COST Action to Australian research institutes ([http://www.cost.esf.org/index.php?id=18&no\\_cache=1&tx\\_ttnews\[tt\\_news\]=447&tx\\_ttnews\[backPid\]=4&chash=64bf597a61](http://www.cost.esf.org/index.php?id=18&no_cache=1&tx_ttnews[tt_news]=447&tx_ttnews[backPid]=4&chash=64bf597a61)).

An already broad and well-known consortium teamed up for this possible new COST Action (including many members of NEWCOM). The preliminary proposal was already selected out of 50 from 500 in total to be invited to submit a full proposal end of July. In the last selection process approx. 25 COST Actions out of 50 COST Actions Proposals will get support. The chance to get through is already quite high. The COST Action would start in January 2009. Therefore, please join this consortium!

For further information please contact [simon.plass@dlr.de](mailto:simon.plass@dlr.de)



## OPPORTUNITIES



### Australian Academy of Science – International Grants: Scientific visits to Asia, Europe & North America.

The Australian Academy of Science is inviting applications for grants for short-term scientific visits (14 – 40 days) to Europe, North America (USA, Canada and Mexico) and Asia (Japan, China, Korea and Taiwan) in 2009, to foster collaborations between Australian and overseas researchers. Closing date for applications is 27 June 2008.

<http://www.science.org.au/internat/programs.htm>

Applicants must propose a collaborative research project, or specific activity, which has been developed in consultation with host scientists

This project is supported by the Department of Innovation, Industry, Science and Research's *International Science Linkages* – Science Academies Programme.

All enquiries to Charis Tyrrel, 02 6201 9412 or [charis.tyrrel@science.org.au](mailto:charis.tyrrel@science.org.au).



## Coming Events

Event Date	Event	Call for Papers
14-16 July 08	ACoRN Workshops in July – Victoria University <a href="http://www.acorn.net.au/event/WorkshopsJuly08/">http://www.acorn.net.au/event/WorkshopsJuly08/</a>	
17 July 08	ACoRN Co-Operative Wireless Networks Tutorial – Victoria University <a href="http://www.acorn.net.au/event/cwtutorial08/">http://www.acorn.net.au/event/cwtutorial08/</a>	
14– 18 Sept 08	PIMRC 08 – France <a href="http://www.pimrc2008.org">http://www.pimrc2008.org</a>	
12-14 Oct 08	Wireless Communications, Networking and Mobile Computing – China <a href="http://www.wicom-meeting.org/wicom2008Submission/website/wicom/">http://www.wicom-meeting.org/wicom2008Submission/website/wicom/</a>	
7 <sup>th</sup> – 10 Dec 2008	International Symposium on Information Theory and its Applications (ISITA2008) <a href="https://www.cs.auckland.ac.nz/research/conferences/isita2008/">https://www.cs.auckland.ac.nz/research/conferences/isita2008/</a>	
15-17 Dec 08	ICSPCS – Gold Coast <a href="http://www.dspsc-witsp.com/icspcs_2008">http://www.dspsc-witsp.com/icspcs_2008</a>	20 July 08

For a complete list of coming events and call for papers, see the [event calendar](http://www.acorn.net.au/events/) <http://www.acorn.net.au/events/> .

